these have taken up production of various items.

Russian scientists and Technicians to join R&D organisations

4218. SHRI K.R. MALKANI: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that due to the general crisis in Russia, lots of top-grade scientists and technicians are out of job or getting just about $50 a month (vide the International Herald Tribune, Hong Kong edition, 26th July); and

(b) whether Government would consider inviting such top scientists and technicians to join our research and development organisations?

THE MINISTER OF STATE IN PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN DEPARTMENTS OF ATOMIC ENERGY, SPACE AND IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) and (b) Government does not have information on this matter. Russian specialists are associated as short/long term consultants with our Science and Technology (S&T) collaborative programmes with Russia.

Study of Jupiter Collisions

4219. DR. SHRIKANT RAMCHANDRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) the details of the studies made by Indian Scientists and Astronomers about the recent event of the Comet striking Planet Jupiter;

(b) who made these studies and whether these studies were sponsored by Government;

(c) whether any Indian Scientist or Astronomer has predicted any Comet striking the Earth in the near future;

(d) if so, the details thereof;

(e) whether Indian authorities are planning any tie-up with the NASA of USA for such studies; and

(f) if so, the details thereof?

THE MINISTER OF STATE IN PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) Several scientific organisations in India had planned and carried out observations of the Comet Shoemaker Levy-9 colliding with the Planet Jupiter as detailed below:

(i) *Optical Observations:*

Indian Institute of Astrophysics (IIA) Bangalore obtained 200 High Quality Images of this collision through 6 filters in various wave length ranges from their observatory at Kavalur. These astronomical events were powerful and caused visible effects on the Jovian atmosphere such as change in the intensity of methane bands and emission of intense radiation from heated clouds of gas which mushroomed above the atmosphere. The event also left prominent changes on the visible appearance of the atmosphere of the planet.

Series of fast images were obtained at Japal Rangapur Observatory, Hyderabad with the help of Sophisticated CCD Camera. The photographs obtained show the dark regions of crash sites of Jupiter.

Optical observations were also carried out at Jaisalmer (Rajasthan) by the Physical Research Laboratory, Ahmedabad. About 200 frames were recorded. Detailed image processing is under progress.

ii. *Radio Observations:*

Scientists at Raman Research Institute, Bangalore detected several